

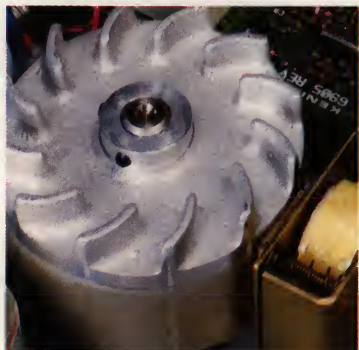
Series 7300 Disk Drives



Series 7300 Disk Drives

Fixed Disk 40 and 80
Megabytes

- The Right Size
- The Right Interfaces
- The Right Price



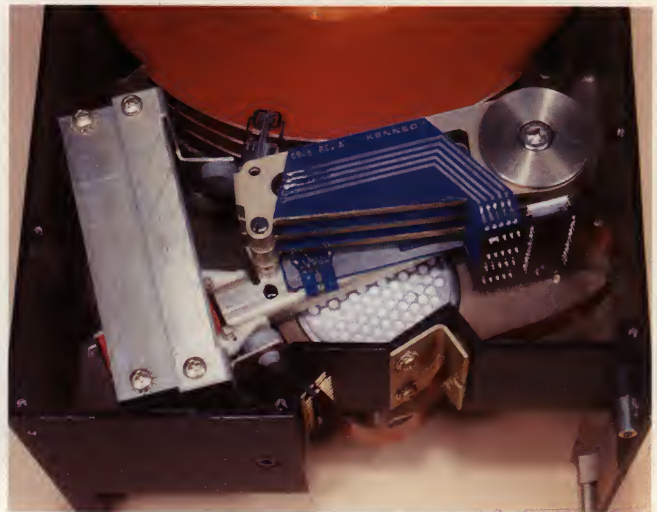
Winchester disk drives provide major advantages over other types of mass memory products. These advantages are: Smaller size, superior reliability and lower cost. The Series 7300 Fixed Disk Drives from Kennedy Company have been designed to optimize these three advantages.

SIZE

The 200mm diameter was chosen because it provides the optimum compromise between storage capacity and space efficiency. The 7300 Series maintains the standard 8 inch floppy form-factor while providing 40 or 80 megabytes of data storage.

The 7300 is just 4.62 inches high. This means that two units can be mounted side by side in a standard 19 inch RETMA rack, providing up to 160 megabytes in less than 5 inches. Not even the 14 inch Winchesters can make this claim.

Development work going on at Kennedy Company today will ultimately make it possible to provide even greater storage capacities on the Series 7300.



ROTARY VOICE COIL POSITIONER

Kennedy engineers present PosiTrack. This unique design was created to satisfy the requirement for accurate, high speed data access utilizing the minimum amount of space.

The Read/Write heads and voice coil actuator are at the same end of the positioner arm. This actuator-to-head proximity virtually eliminates inaccuracies caused by pivot bearing tolerances and arm resonance. Tracking error is therefore about half that of other rotary actuator designs.

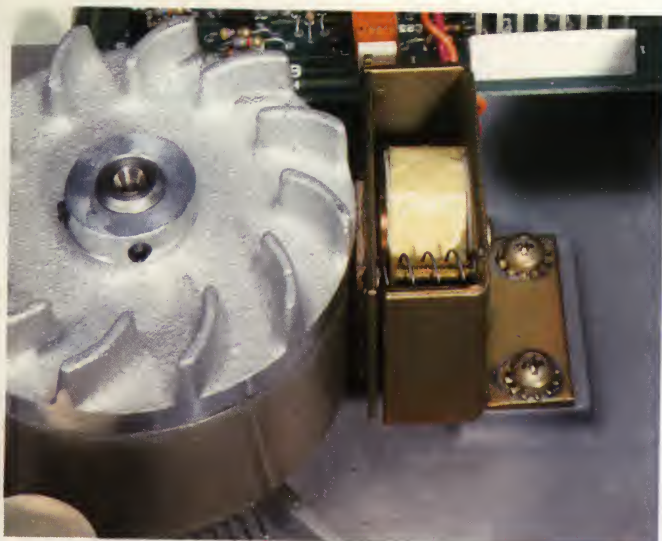
Other features include track-following closed-loop servo system, low actuator power requirements, and an average seek time of 30 MS.

PosiTrack makes the 7300 Series ideal for even the most demanding customer applications.

D.C. SPINDLE MOTOR

The use of a D.C. spin motor eliminates the extra space required for large A.C. motors and contributes to the small package size of the 7300. This also eliminates the need to change parts when drives are used in international applications.

One additional benefit is derived because of the elimination of troublesome belts and pulleys and the subsequent lowering of the parts count.



DATA RELIABILITY

Winchester disk drives are inherently more reliable than removable media devices by virtue of the lower overall parts count and the sealed head/disk assembly (HDA) which prevents contamination from causing the destruction of data.

The Series 7300 has a number of additional design features which contribute to data security and customer confidence.

SPINDLE BRAKE AND LANDING ZONES

Head crashes when they do occur on Winchester drives, usually happen during the power up or power down cycles, when the heads are in unstable flight.

The 7300 features a simple, effective mechanical friction brake to make the power down period as short as possible. Dedicated head landing zones are also provided to assure that the heads never come to rest on areas where data is recorded. The brake also serves to prevent the disks from turning during shipment.

ABSOLUTE FILTER SYSTEM

The Series 7300 uses a double filtration system to maintain the critically low particulate count present in the drive when it is assembled in our Class 100 clean room. One 0.3 micron filter removes any particles in the recirculated air that might break loose from mechanisms inside the HDA and another 0.3 micron filter is used to secure the pressure equalization port.



POSITIONER LOCK MECHANISM

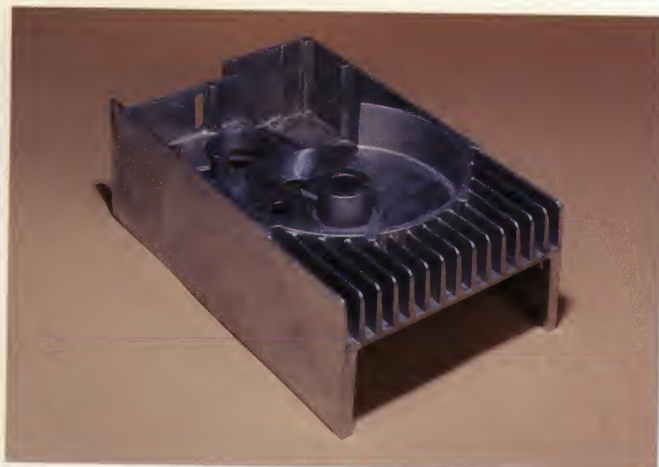
The 7300 features an actuator locking mechanism which is automatically engaged whenever the Read/Write heads are positioned to the landing zones.

Kennedy has eliminated the possibility of head movement causing media damage during shipment. Data integrity is assured.

THERMAL CONTROL MECHANISMS

Temperature control inside the HDA is critical to maintaining data integrity. Several features designed into the Series 7300 to control this are:

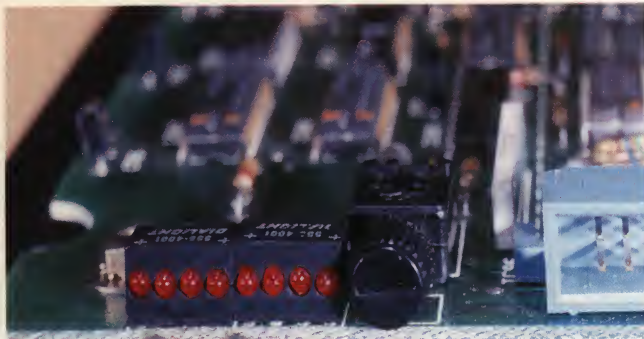
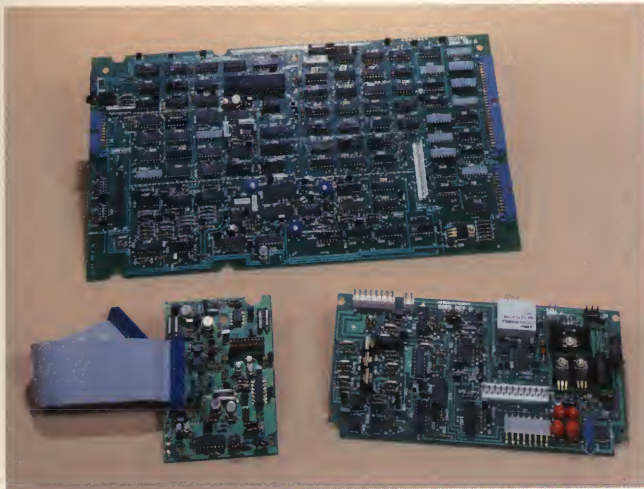
- One piece cast aluminum drive housing.
- Deeply finned housing for greater surface area.
- Finned spindle assembly with plenum to direct cooling air over the servo control circuits.



Specifications

| MODEL | 7340 | 7380 |
|--------------------------------------|--|--------|
| Recording Characteristics | | |
| Unformatted Capacity (MB) | 41.4 | 82.9 |
| Cylinders Including Spares | 411 | 823 |
| Bytes per Track | 20,160 | 20,160 |
| Recording Density (BPI) | 9006 | 9006 |
| Track Density (TPI) | 560 | 1120 |
| Data Surfaces | 5 | 5 |
| Servo Surfaces | 1 | 1 |
| Encoding Method | MFM | MFM |
| Data Access Characteristics | | |
| Data Transfer Rate | 1,209 KB/Sec | |
| Spindle Speed | 3600 RPM | |
| Minimum Seek Time | 6 MS | |
| Maximum Seek Time | 55 MS | |
| Average Seek Time | 30 MS | |
| Average Rotational Delay | 8.33 MS | |
| Error Rates | | |
| Recoverable | < 1 IN 10 ¹⁰ Bits | |
| Non-Recoverable | < 1 IN 10 ¹² Bits | |
| Position | < 1 IN 10 ⁶ Seeks | |
| Reliability Characteristics | | |
| MTBF | 10,000 Hours | |
| MTTB | 0.5 Hours | |
| Service Life | 5 Years | |
| Preventative Maintenance | None | |
| Environmental Characteristics | | |
| Operating Temperature | 40° to 104°F (4° to 40°C) | |
| Humidity | 8% to 80% Non-condensing | |
| Altitude | Up to 10,000 Feet | |
| Power Requirements (DC Only) | | |
| +5 Volts, -5 Volts | 2.0 Amp. Max. | |
| +12 Volts, -12 Volts | 2.0 Amps. Max. (Seeking) | |
| +24 Volts | 1.2 Amp. Running/ 3.5 Amp. Starting (15 Sec.) | |
| Power Dissipation | 75 Watts Max. | |
| Physical Characteristics | | |
| Height | 4.62 inches (11.73 cm) | |
| Width | 8.55 inches (21.71 cm) | |
| Depth | 14.25 inches (36.19 cm) | |
| Weight | 20 pounds (9.03 kg) | |
| Interface Options | | |
| SMD | | |
| ANSI | | |
| PICOBUS | | |

Specifications are subject to change without notice.



COST

The cost advantages of Winchester disk drives are well documented. With the Kennedy Series 7300 however, the cost savings extend far beyond the initial purchase price. The lowest possible cost of ownership was a design goal.

ELECTRICAL

All electronic circuits are functionally divided into three printed circuit boards. Data and servo signal processing is done on the Preamp PCB; the servo power amplifier and spindle motor drive electronics are located on the Power PCB; remaining functions including the drive interface circuits are contained on the Control PCB. This separation greatly aids in isolating problems and reducing repair time.

To further assist in fault detection and troubleshooting the Control PCB contains LEDs to display Seek, Read/Write, Power and other drive errors and a fault reset pushbutton.

MECHANICAL

One of the largest contributors to our lower cost of ownership is the minimal spares inventory required to support the Series 7300. All mechanical and electronic assemblies are common to the 40MB and 80MB units. This allows spares stocking independent of your customers capacity requirements and lowers program startup costs.

MAINTENANCE

The design of the Series 7300 virtually eliminates any in-the-field service.

Preventive maintenance on these drives is not required.

No costly special tools are necessary because there are no mechanical adjustments to perform. And all electrical adjustments are factory set and sealed and never again require attention.

Shown at the left is the optional operator control panel of the Series 7300. It features switches for Start, Fault Clear, Write Protect and Test, and LEDs to show Ready, Select, Write Protect, Fault and Start conditions. Unit address selection is also accomplished on this panel.

KENNEDY

An Allegheny International Company

CORPORATE HEADQUARTERS

1600 Shamrock Ave.
Monrovia, CA 91016
(213) 357-8831
TELEX 472-0116 KENNEDY
TWX 910-585-3249

EUROPEAN HEADQUARTERS

Koningin Elisabethplein, 8
B-2700 Sint-Niklaas
Belgium
Tel: (031) 771962
Telex: 71870 KEN CO

KENNEDY INTERNATIONAL

McGraw Hill House
Shoppenhangers Road
Maidenhead, Berkshire
SL 6 2QL
England
Tel: (0628) 73939
Telex: 847871 KENUKS G

EASTERN REGIONAL OFFICE

350 Vanderbilt Motor Parkway
Hauppauge, N.Y. 11787
Tel: (516) 231-6063
Telex: 510-227-6145

OEM SUPPORT SERVICES

Kennedy is a recognized leader in supplying quality OEM peripheral products. We know however, that it takes more than hardware to be a viable vendor.

Application Engineering

During the initial phases of your 7300 program, a skilled engineer will assist you in integrating the device into your system.

Training

Qualified instructors are available to train your technicians in the operation and maintenance of the 7300. Classes are held at Kennedy headquarters in the U.S. and Europe, or at your facilities should you desire.

Spare Parts

Kennedy Company maintains fully stocked spare parts depots at strategic locations in the U.S. and Europe. Our years of experience in serving OEM customers have provided us with a professional and responsive spare parts capability. We are committed to ship your spare parts within 48 hours after the order is received. Volume discounts are available to OEM customers.

Service

A comprehensive field engineering group is available to support your customer engineers whenever and wherever needed. Service centers staffed with factory trained technicians are located in strategic cities worldwide.

Factory Authorized
Representative